

Course title Komerccjalizacja wyników badań / Commercialization of research outcomes		ECTS code 13.3.0492	
Name of unit administrating study Faculty of Chemistry			
Studies			
Field of study	Type	Form	
Chemistry	Master	Full-time studies	
Teaching staff Ph.D., D.Sc. Karol Krzywiński, Assoc. Prof.			
Forms of classes, the realization and number of hours		ECTS credits	
A. Forms of classes, in accordance with the UG Rector's regulations Lecture		Classes: 5 hours Consultation: 2 hours Student's own work: 18 hours TOTAL: 25 hours - 1 ECTS	
B. The realization of activities Classes in the auditorium			
C. Number of hours 5 hours			
The academic cycle First year, winter semester			
Type of course obligatory		Language of instruction Polish	
Teaching methods Lectures with multimedia presentation		Form and method of assessment and basic criteria for evaluation or examination requirements	
		A. Final evaluation, in accordance with the UG study regulations Credit for a grade	
		B. Assessment methods Preparation of essay/thesis - student's own work	
		C. The basic criteria for evaluation/exam requirements The grade of individual student will be issued on the basis of the quality of the project delivered and on the basis of her/his class activity. In the event of failure to obtain credit because of too low score, failure to meet submission deadline or too low lecture attendance (<50%), the negative grade can be improved by solving final test, covering problems discussed during classes. The final grades will be issued in accordance with general guidelines, listed in the "UG Study Regulations."	
Required courses and introductory requirements Communicative English skills; Ability to use MS Excel spreadsheet for simple calculations and any program for the presentation of results and ideas (e.g. MS PowerPoint).			
Aims of education To familiarize students with the issues listed in the course content; To acquaint students with the assumptions of the knowledge-based economy; To acquaint students with intellectual and industrial property issues; To acquaint students with the problems and formal issues of patent applications; Acquaintance with			

the principles of cooperation within the research group; Acquainting with problems of financing of research projects; The criteria for selecting the innovative research results for further funding targeted for implementation; Acquainted with the criteria for assessing the commercial potential of the project; Acquainting with the way of presenting the results of scientific research; Acquainting with the method of preparing research plan and its commercialization. Acquaintance with the project management in the organization.

Course contents

Basic concepts of commercialization and the research and development sector; Models and examples of commercialization; Stages of commercialization of innovative research; Knowledge-based economy; Financing research and scientific implementations; Patent law and patents; Marketing in science. Diagnosis of the situation in Poland in the R&D sector; Managerial competence; Management of scientific research and development.

Bibliography of literature

A. Literature required to pass the course

A.1. Used during meetings

1. Original materials presented during lectures, prepared on the basis of the resources of the "Competence for Science and Business Cooperation", the project financed by the European Union under the European Social Funds (EU/ESF, 2012).
2. Problem issues, delivered in electronic form by the teacher necessary to complete the final thesis.

A.2. Extracurricular/additional readings

1. Nidzworski D., Kuźbicki M., Kowalczyk I., Matusiak K., Przybyłowski M., Kipiel K., Muzalewska M., Ciesielski S., "Bio Business School - Guide to the commercialization of research results from the life science industry", Chroma Publishing House, Gdańsk, Poland, 2010.
2. S. Łobejko, A. Sosnowska (ed.), "Commercialization of scientific research results. A practical guide for scientists", a collective work financed by the EU / EFZ, published by the Marshal's Office of the Mazowieckie Voivodeship, Warsaw, Poland 2013.

Knowledge

Student describes stages of commercialization; Knows the mechanisms and models of commercialization; Identifies and recognizes recent market features; Knows basic requirements for patent application; Distinguishes between types of intellectual property; Knows the sources of financing of research projects; Understands the principles of cooperation in research team and effective communication in the group. Knows and understands Belbin's theory of individual roles in a group